

CLAIMS

[1] A circuit breaker characterized by comprising a pair of stationary contactors which are disposed in opposition to each other and each of which is provided with a stationary contact, a movable contactor which includes a pair of movable contacts respectively disposed in opposition to the stationary contacts and which is capable of bridging both said stationary contactors, a switching mechanism section which operates when an overcurrent has flowed through said stationary contactors, a crossbar which is engaged with a substantially central part of said movable contactor from a side of said stationary contactors and which separates said movable contactor from said stationary contactors upon the operation of said switching mechanism section, a contact pressure spring which is engaged with said crossbar at one end and with the substantially central part of said movable contactor at the other end and which urges said movable contactor toward said stationary contactors, and arc extinction chambers which are respectively disposed near both end parts of said movable contactor and which extinguish an arc struck at the separation of said movable contactor from said stationary contactors.

[2] A circuit breaker as defined in claim 1,

characterized in that said crossbar is formed with an inclined groove which extends obliquely downwards from a side surface thereof, and that a pin is snugly inserted into said inclined groove so as to be used as an engagement portion for one end of said contact pressure spring.

[3] A circuit breaker as defined in claim 1, characterized in that said crossbar includes a depression portion which extends onto a side of said movable contactor and which depresses said movable contactor in engagement with substantially the central part of said movable contactor, and that an accommodation portion which accommodates said contact pressure spring therein is provided in said depression portion.

[4] A circuit breaker as defined in claim 3, characterized by comprising a tubular cover member which conceals said depression portion so as to be slidable on an outer peripheral surface of said depression portion and which is fixed to said movable contactor.

[5] A circuit breaker as defined in claim 4, characterized in that said cover member has its fixation portion with said movable contactor extended near to said movable contacts.

[6] A circuit breaker as defined in claim 4,

characterized in that an intermediate member is interposed between fixed parts of said cover member and said movable contactor.

[7] A circuit breaker as defined in claim 4, characterized by comprising a separation holding member which holds said movable contactor in a separated state when said movable contactor has been separated and moved by an electromagnetic repulsive force.

[8] A circuit breaker as defined in claim 7, characterized in that said separation holding member is constructed as a U-shaped member which includes first protrusions on outer surfaces of both arms formed in a shape of letter U, that said separation holding member is juxtaposed with said contact pressure spring within said depression portion, and that said first protrusions are formed so as to be engageable with second protrusions which are formed on an inner surface of said cover member.

[9] A circuit breaker as defined in claim 1, characterized by comprising a link which interlocks with said switching mechanism section, and a slot which is provided in said crossbar, and that said link and said crossbar are engaged through a pin which is snugly inserted into said slot.

[10] A circuit breaker as defined in claim 1,

characterized in that a commutating electrode which commutates an arc struck when said movable contactor has been separated from said stationary contactors is disposed on a side of said movable contactor remote from said stationary contactors.

[11] A circuit breaker as defined in claim 10, characterized in that said commutating electrode includes insertion holes through which arc horns formed at both end parts of said movable contactor can be inserted at the separation of said movable contactor from said stationary contactors.

[12] A circuit breaker as defined in claim 10, characterized in that parallel surfaces which are formed substantially in parallel with flat surfaces of grids of said arc extinction chambers are provided at both end parts of said commutating electrode.